



Thomas Quinn, a Division Rapid Response Force Soldier stands guard as an AH-64D Apache helicopter takes off at Camp Taji, Iraq.  
Photo by Spc. Nathan J. Hoskins & army.mil

## Message from the Army SBIR Program Manager



After spending the past 14 months as the Army SBIR Program Manager, I have accepted a new position as the Department of Defense (DoD) SBIR Program Administrator. Although this has been a short stay, I have learned much about the SBIR process and intend to enhance all DoD SBIR programs using this new knowledge.

To the Army researchers, my staff, and the thousands of Small Businesses doing the research — **Thank You** for your active participation in the Army SBIR Program and teaching me on a daily basis. Your passion and dedication to the program is unsurpassed in the Acquisition Community and I appreciate your support. I look forward to continuing to work with you as I assume the duties as the DoD Program Administrator.

In my place, the acting Army SBIR Program Manager will be John Pucci who has been my Operations Manager. Besides understanding SBIR, John has a long history of supporting research for DoD, is very familiar with the Army's Science and Technology portfolio, management, and business offices, and has extensive experience with the Army Acquisition Community. I am confident that he will be able to run Army SBIR very effectively and hope you will give him the same level of support that you gave me. Thanks again for your participation and I look forward to our continuing journey to upgrade the SBIR program.

Sincerely,  
Christopher S. Rinaldi, P.E.

## Spotlight: Chris Willisson Technical Assistance Advocate (TAA)

Chris Willisson is the Technical Assistance Advocate (TAA) for the Army SBIR Team located at Redstone Arsenal, Alabama. Mr. Willisson's technology areas are aviation, missile, and simulations/training, and he provides support to the Aviation and Missile Research Development and Engineering Center (AMRDEC), PEO Aviation, PEO Missile and Space, Army Space and Missile Defense Command (SMDC), Simulation and Training Technology Center (STTC), and PEO Simulation Training and Instrumentation.

Before joining the SBIR TAA team, Chris was an Arbitrator and Mediator for the Better Business Bureau, a System Analysis and Business process developer, a Technology Incubator Director, and a Commercialization Counselor for a SBA Small Business Development Center.

Like the other Army SBIR TAAs, Chris realizes the importance of transition through both Phase I and Phase II efforts and provides expert advice, analysis and counseling in 1) being a subject matter expert on the SBIR program; 2) resolving both technical and business issues that arise during development; 3) minimizing risks associated with a project; 4) facilitating relationships between SBIR projects and stakeholders along the transition path; 5) developing commercialization strategies, both for Army programs/systems as well as outside the DoD environment.

For more information on the TAA/SBIR program go to [www.armysbir.com/sbir/taadesc.htm](http://www.armysbir.com/sbir/taadesc.htm).

The purpose of this newsletter is to provide the small business community, Army, DoD and other government researchers and leadership additional insight into the Army SBIR program.

### Army SBIR Vision

To be the Army's premier source of innovative technology solutions, providing direct access to America's high-tech small business research & development community, enabling our Soldiers deployed around the world.

### Army SBIR Helpdesk

The Army SBIR Helpdesk provides answers to program questions and assistance to small businesses and Government participants. It is operated Monday through Friday from 8 am to 5 pm (except on Federal holidays). You may reach the help desk by email at

[army.sbir@us.army.mil](mailto:army.sbir@us.army.mil) or by calling (703) 806-2085.



US Army Sgt. Justin Walker provides security during a patrol of the Riyahd village in Iraq. March 8, 2007.  
Photo by: army.mil

## SOLICITATION DATES:

**10.1**

Solicitation Opens Dec 10, 2009

Solicitation Closes: Jan 13, 2010  
Phase I proposals due

## OUTREACH EVENTS

10th Annual SBIR/ STTR Small Business Conference Jan 25-27, Huntsville AL

<http://aamuri.aamu.edu>

2010 12th Annual Regional SBIR Conference Jan 28-29, St. Louis, MO

[www.emergingtech.org](http://www.emergingtech.org)

AUSA Winter Symposium & Expo Feb 24-26, Fort Lauderdale

[www.ausa.org](http://www.ausa.org)

2010 Spring National SBIR/STTR Conference Apr 21-23, Hartford, CT

[www.ct.org](http://www.ct.org)

## Have a Success Story?

We are continually seeking new "success stories" from small businesses, much like the one you see featured in this newsletter. Successful small businesses and their technology are highlighted in our yearly Commercialization Brochure, website, and quarterly newsletter. If you are interested in submitting a story, please contact the SBIR Program Management Office at [army.sbir@us.army.mil](mailto:army.sbir@us.army.mil).

# Army SBIR Success Story



Luna Innovations, Inc.  
Blacksburg, VA  
[www.lunainnovations.com](http://www.lunainnovations.com)



US Army Research Office

## Development of Textiles with Antimicrobial Properties

Currently, biological agents and disease pathogens pose a threat to homeland security and the domestic food supply. New technologies are necessary to protect soldiers in the field as well as civilian first responders and domestic markets. Luna Innovations is developing self-decontaminating textiles that immediately render biological agents harmless upon contact with the material. This phenomenon is achieved by permanently attaching biocides to the textile surface. The resulting material is a long-lasting protective garment.

Several different biocides have been applied to and immobilized on cotton fabric. In collaboration with Dan River Textile, Inc., a large scale trial was conducted in which biocide immobilized cotton fabric was prepared, laundered, and tested for both qualitative and quantitative biocidal activity. Results indicate that the biocidal textile is most effective against *S. aureus* and *B. atrophaeus*. The textiles maintained activity even after repeated laundering rendering them suitable for protective garments as well as tents or other protective fabrics.

In addition to the self-decontaminating textile application, this technology has evolved into a renewable, self-cleaning coating program for decontamination of biological agents on vehicles and equipment. Current decontamination processes for biological agents are complex, cumbersome and costly. Technology developed by the Luna Innovations' team circumvents this process by employing a multi-functional coating formulation with continuous ability to decontaminate the surface exposed to biological agents, simplifying the decontamination process for vehicles and equipments. The self-decontaminating coatings have been shown to efficiently neutralize biological pathogens at the surface achieving near quantitative killing of vegetative bacteria and a 99.99+% reduction against Anthrax-type spores. The multi-functional formulation consisting of the biocide and nutrient/germinant can be incorporated directly into a Chemical Agent Resistant Coating (CARC) resin. The biocidal CARC is active against vegetative cells and spores.

The potential benefits of this multi-functional coating technology to military and civilian institutions are tremendous with ability to greatly reduce the threat of biological agents and minimize transmission of harmful pathogens from contaminated surfaces. The primary market for this technology is in the protection and passive hazard mitigation of biological agents and disease pathogens with the Department of Defense, the Department of Homeland Security, and civilian markets for food safety and hospital hygiene being the main customers.

## Phase III Impacts

Luna Innovations has received ~\$3.4M from various Department of Defense programs to advance biocidal surface technology. For example, technology researched in the textile program is being adapted to self-decontaminating surface (SDS) coatings for vehicles and equipment. A mature market for such military vehicle and equipment biocidal coatings is estimated at \$165 million to \$210 million per year. Biocidal coatings have also been demonstrated for potential uses in buildings and HVAC equipment. Further developments in antimicrobial textiles have been achieved through the use of the biocides in unique, cost effective plasma aerosol deposition directly onto textiles.

